

IN THE CIRCUIT COURT OF GREENE COUNTY  
STATE OF MISSOURI

STATE OF MISSOURI, ex rel.,  
JOHN ASHCROFT, Attorney General  
of Missouri, and THE MISSOURI  
DEPARTMENT OF NATURAL RESOURCES,

Plaintiff,

v.

LITTON SYSTEMS, INC.,

Defendant.

Case No. CV182-2093-CC3

PETITION FOR STATUTORY PENALTIES

COUNT I

COMES NOW the State of Missouri, plaintiff herein, at the relation of John Ashcroft, Attorney General of Missouri, and the Missouri Department of Natural Resources, and for Count I of its petition states:

1. That John Ashcroft is the duly elected, qualified and acting Attorney General of the State of Missouri; and the Missouri Department of Natural Resources (DNR) is a duly authorized state agency created under § 10 of the Omnibus State Reorganization Act of 1974, which administers the provisions of §§ 260.350 to 260.430, RSMo and the rules and regulations promulgated thereunder.

2. That defendant, Litton Systems, Inc., is a duly organized and existing corporation according to the laws of the State of Missouri, with its principal place of business in Greene County, Missouri.

3. That defendant owns and operates a facility for the manufacture of printed circuit boards at 4811 West Kearney Street, Springfield, Greene County, Missouri.

4. That the acts by defendant alleged herein occurred and continue to occur in Greene County, Missouri.

5. That venue in this action is proper according to § 260.425.1, RSMo.

6. That defendant, as part of its circuit board manufacturing operation in Greene County, owned, operated, and maintained a backwash wastewater lagoon (hereafter "Pond A") which received



R00337345

RCRA RECORDS CENTER

RECEIVED

OCT 25 1982

AIR AND HAZARDOUS MATERIALS  
DIVISION

Please  
mail to  
David Doyle  
EPA

and contained backwash from an ion exchange, etching and eletro-plating wastewater treatment sludge associated with circuit board production, solvents used in degreasing, chromic acid from smear removal and etching, and spent etchant.

7. That the substances referenced in Paragraph 6 hereof are either listed or characteristic hazardous wastes, or both, pursuant to 10 CSR 25-4.010 and the Hazardous Waste Management Law, §§ 260.350 to 260.430, RSMo.

8. That "Pond A" is a hazardous waste surface impoundment as defined by 10 CSR 25-3.010(1)(S)-4 and 40 CFR § 260.10(a), and a hazardous waste facility as defined by § 260.360(10), RSMo.

9. That the hydrogeology of the land under and around "Pond A" is such that failure of the "Pond A" containment system and dikes would result in contamination of the groundwater since the liquids contained in "Pond A" would quickly enter the sub-surface waters of the state by the numerous local sinkholes in permeable soils over deeply weathered, karst limestone.

10. That defendant has never applied for, nor obtained, a permit from the Missouri Department of Natural Resources authorizing the operation of "Pond A" as required by § 260.395.7, RSMo.

11. That defendant, pursuant to 10 CSR 25-7.011(1)(D), operated "Pond A" under the authority of the Missouri "Interim Status" provision of the Missouri Hazardous Waste Regulations, said "Interim Status" constituting defendant's authorization to operate a hazardous waste surface impoundment.

12. That defendant, in accordance with the Missouri Interim Status Regulation, 10 CSR 25-7.011(1)(D), was required to comply with appropriate portions of 40 CFR Part 265 (a copy of which is attached hereto and incorporated herein by reference as Exhibit 1).

13. That on or about April 30, 1982, defendant removed all or substantially all of the liquids contained in "Pond A," or approximately ten million gallons, by spray irrigating said liquids on the surface of defendant's property and by taking other action in accordance with DNR's "Order to Cease and Correct Imminent

Hazard" dated March 18, 1982 and accompanying emergency directives to Ron Enos, President, Advanced Circuitry Division, Litton Systems, Inc. from Robert Schreiber, Jr., Director of the Division of Environmental Quality for DNR, dated March 19 and 26, 1982. (Copies of said order and directives are attached hereto as if more fully set forth, respectively, as "Exhibit 2," "Exhibit 3" and "Exhibit 4").

14. That defendant was required, pursuant to 10 CSR 25-7.011(1) (D) and 40 CFR Part 265.222, to maintain at least 60 centimeters (two feet) of "freeboard", as defined in 40 CFR Part 260.10, for "Pond A."

15. That on or about June 16, 1981, it was discovered by representatives of the Department of Natural Resources that defendant was not maintaining two feet of freeboard for "Pond A" and was maintaining only four and one half inches of freeboard.

16. That by letter dated July 31, 1981, (A copy of which is attached hereto as Exhibit 5) to Mr. William Guyette, President, Advanced Circuitry Division, Litton Systems, Inc., from Ed Lightfoot, Deputy Director, Air and Land Branch, Missouri Department of Natural Resources, defendant was ordered to achieve two feet of freeboard in "Pond A" by September 18, 1981.

17. That by letter dated September 10, 1981, (A copy of which is attached hereto as Exhibit 6) to Mr. James K. Dow, Facility Manager for defendant, from Ed Lightfoot, Deputy Director, Air and Land Branch, Department of Natural Resources, defendant was allowed an extension until October 30, 1981, to attain the necessary two feet of freeboard for "Pond A."

18. That on or before November 18, 1981, but after June 16, 1981, defendant substantially increased the height of the dikes forming the perimeter of said "Pond A" thereby increasing the capacity of said "Pond A" from approximately eight million gallons to approximately ten million gallons or approximately 25%.

19. That on or about November 18, 1981, defendant had, after increasing the height of the "Pond A" dikes as alleged in Paragraph 18 hereof, increased the liquid level in "Pond A" so that the required two feet of freeboard was not attained and was, on this date, maintaining only 12.25 inches of freeboard.

20. That on or about March 18, 1982, defendant still had not attained the required two feet of freeboard for its said "Pond A" and was maintaining only six inches of freeboard at that time.

21. That defendant's failure to secure the required freeboard, defendant's increase in the height of the "Pond A" dikes, and the increased liquid level in "Pond A" after increasing the height of the "Pond A" dikes, caused, or substantially contributed in causing, excessive saturation, sliding, and point leakage flows on some or all of the dikes comprising the perimeter of said "Pond A" and, in conjunction with the hydrogeologic conditions as alleged in Paragraph nine hereof, created an imminent hazard that a total failure of "Pond A" would occur, with consequent contamination of groundwater, as defined in 10 CSR 25-3.010(G)-3, under and around said "Pond A."

22. That defendant's failure to secure a minimum of two feet of freeboard at its said "Pond A" constitutes a violation of 40 CFR Part 265.222, 10 CSR 25-7.011(1)(D), and § 260.425, RSMo.

23. That defendant's failure to secure a minimum of two feet of freeboard at its said "Pond A" by October 30, 1981 constitutes a failure to comply with the orders from DNR, as alleged in Paragraphs sixteen and seventeen hereof, and is therefore a violation of § 260.425.1, RSMo.

24. That the assessment of a penalty not to exceed \$10,000.00 per day for each day, or part thereof, that a violation occurred is authorized by § 260.425.1, RSMo.

WHEREFORE, plaintiff prays the court grant the following relief:

1. An order assessing a penalty against defendant in the amount of \$10,000.00 per day for each day, or part thereof, that each of the violations aforesaid occurred and continue to occur.

2. An order assessing the costs of these proceedings against defendant.

3. Such other relief as the court deems just and proper.

COUNT II

COMES NOW plaintiff, and for Count II of its petition states:

25. Plaintiff realleges Paragraphs one through thirteen of its petition and incorporates the same by reference herein.

26. That defendant, as required by 10 CSR 25-7.011(1)(D), 40 CFR Part 265.226 and 40 CFR Part 265.15(c), must inspect the freeboard level of said surface impoundment at least once each operating day to ensure that two feet of freeboard is maintained and to inspect the surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration, or failures in the impoundment and to remedy any leaks, deterioration, malfunctions, or inadequate freeboard so found.

27. That on or before June 16, 1981, defendant knew or should have known that inadequate freeboard, less than two feet, was being maintained at said "Pond A."

28. That from June 16, 1981 through March 25, 1982, defendant failed to attain two feet or more of freeboard at said "Pond A."

29. That from on or about June 16, 1981, through March 30, 1982, defendant failed to remedy the said inadequate freeboard, as alleged in Paragraph 28 hereof, at said "Pond A."

30. That said failure to remedy the inadequate freeboard at said "Pond A" constitutes a violation of 40 CFR Part 265.15(c), 10 CSR 25-7.011(1)(D) and § 260.425.1, RSMo.

31. That, pleading in the alternative, defendant failed to inspect the freeboard level of said "Pond A" each operating day from June 16, 1981 through March 30, 1982 and that defendant failed to inspect "Pond A" including dikes and vegetation surrounding the dikes, at least once a week to detect any leaks, deterioration, or failure in "Pond A."

32. That defendant's failure to inspect the freeboard level of said "Pond A" each operating day and defendant's failure to inspect "Pond A," including dikes and vegetation surrounding the dikes, at least once a week to detect any leaks, deterioration, or failures in "Pond A" constitutes a violation of 40 CFR Part 265.226, 10 CSR 25-7.011(1)(D), and § 260.425.1, RSMo.

33. That the assessment of a penalty not to exceed \$10,000.00 per day for each day, or part thereof, a violation occurred, is authorized by § 260.425.1, RSMo.

WHEREFORE, plaintiff prays the court grant the following relief:

1. An order assessing a penalty against defendant in the amount of \$10,000.00 per day for each day, or part thereof, that each of the violations aforesaid occurred and continues to occur.

2. An order assessing the costs of these proceedings against defendant.

3. Such other relief as the court deems just and proper.

### COUNT III

COMES NOW plaintiff and for Count III of its petition states:

34. Plaintiff realleges Paragraphs one through thirteen of its petition and incorporates the same by reference herein.

35. That defendant was required, as of November 19, 1981, to implement a groundwater monitoring program capable of determining "Pond A's" impact on the quality of groundwater in the uppermost aquifer, as defined in 10 CSR 25-3.010(1)(A)-5 and 40 CFR Part 260.10, underlying "Pond A" in accordance with 40 CFR Part 265.90 through 40 CFR Part 265.109, inclusive, and 10 CSR 25-7.011(1)(D).

36. That defendant has not implemented a groundwater monitoring program as alleged in Paragraph 35.

37. That defendant's failure to implement, as of November 19, 1981, a groundwater monitoring program, as alleged in Paragraph 35 hereof, constitutes a violation of 40 CFR Part 265, Subpart F, 10 CSR 25-7.011(1)(D), and § 260.425.1, RSMo.

38. That the assessment of a penalty not to exceed \$10,000.00 per day for each day, or part thereof, a violation occurred, is authorized by § 260.425.1, RSMo.

WHEREFORE, plaintiff prays the court grant the following relief:

1. An order assessing a penalty against defendant in the amount of \$10,000.00 per day for each day, or part thereof, the violations aforesaid occurred and continue to occur.

2. An order assessing the cost of these proceedings against defendant.

3. Such other relief as the court deems just and proper.

#### COUNT IV

COMES NOW plaintiff, and for Count IV of its petition states:

39. Plaintiff realleges Paragraphs one through thirteen, eighteen, nineteen, twenty-eight, and twenty-nine of its petition and incorporates the same by reference herein.

40. Defendant is required, in accordance with 40 CFR Part 265.31 and 10 CSR 25-7.011(1)(D), to maintain and operate its said "Pond A" so as to minimize the possibility of, among other things, the sudden or non-sudden release of hazardous waste or hazardous waste constituents to surface water or the soil in a manner which could threaten human health or the environment.

41. That defendant, by failing to maintain adequate freeboard (two feet), as alleged in Paragraphs twenty-eight and twenty-nine hereof, by raising the height of the dikes, and by increasing the capacity and liquid level of "Pond A," as alleged in Paragraphs eighteen and nineteen hereof, greatly increased the possibility of sudden and non-sudden releases of hazardous wastes or hazardous waste constituents to surface water and to the soil under and around "Pond A."

42. That defendant, by maintaining inadequate freeboard, as alleged in Paragraphs twenty-eight and twenty-nine hereof, by raising the height of the dikes and liquid level in "Pond A," as alleged in Paragraphs eighteen and nineteen hereof, and by increasing the capacity of said "Pond A," as alleged in Paragraph eighteen hereof, caused or substantially contributed to the sudden and non-sudden releases of hazardous wastes or hazardous waste constituents to surface waters and to the soil under and around "Pond A."

43. That the increased possibility of releases, as alleged in Paragraph forty-one hereof, and the actual releases, as alleged in Paragraph forty-two hereof, present a threat to human health and the environment in that the hydrogeology of the land under

and around said "Pond A," as alleged in Paragraph 9 hereof, greatly facilitates the entry of any contaminates so released into the subsurface waters and that such subsurface waters are used for, among other things, the drinking water of humans in and around Greene County, Missouri.

44. That the acts or omissions of defendants, as alleged in Paragraphs thirty-nine and forty-three hereof, constitute violations of 40 CFR Part 265.31, 10 CSR 25-7.011(1)(D), and § 260.425.1, RSMo.

45. That the assessment of a penalty not to exceed \$10,000.00 per day for each day, or part thereof, a violation occurred is authorized by § 260.425.1, RSMo.

WHEREFORE, plaintiff prays the court grant the following relief:

1. An order assessing a penalty against defendant in the amount of \$10,000.00 per day for each day, or part thereof, that each of the violations aforesaid occurred and continue to occur.
2. An order assessing the costs of these proceedings against defendant.
3. Such other relief as the court deems just and proper.

#### COUNT V

COMES NOW plaintiff, and for Count V of its petition states:

46. Plaintiff realleges Paragraphs one through thirteen of its petition and incorporates the same by reference herein.

47. That §§ 260.390(1) and 260.395.7, RSMo, prohibit, among other things, the substantial alteration of a hazardous waste facility without first obtaining a hazardous waste facility permit from DNR in accordance with § 260.395, RSMo.

48. That said "Pond A" and all other property that defendant used, or intended to use, for hazardous waste management, constitutes a hazardous waste facility as defined in § 260.360(10), RSMo.

49. That on or before November 18, 1981, but after June 16, 1981, defendant increased the height of the dikes comprising the



perimeter of said "Pond A" thereby increasing the capacity of said "Pond A" from approximately eight million gallons to approximately ten million gallons, or approximately 25%.

50. That the increase in capacity, as alleged in Paragraph forty-nine hereof, constitutes a substantial alteration of defendant's hazardous waste facility, as alleged in Paragraph forty-eight hereof.

51. That prior to substantially altering said hazardous waste facility, as alleged in Paragraphs forty-nine and fifty hereof, defendant did not obtain a Hazardous Waste Facility Permit from DNR as required by §§ 260.390 and 260.395, RSMo.

52. That defendant's failure to first obtain a Hazardous Waste Facility Permit before substantially altering said hazardous waste facility constitutes a violation of §§ 260.390(1), 260.395.7 and 260.425.1, RSMo.

53. That the assessment of a penalty not to exceed \$10,000.00 per day for each day, or part thereof, a violation occurred is authorized by § 260.425.1, RSMo.

WHEREFORE, plaintiff prays the court grant the following relief:

1. An order assessing a penalty against defendant in the amount of \$10,000.00 per day for each day, or part thereof, that the aforesaid violation occurred and continues to occur.
2. An order assessing the cost of these proceedings against defendant.
3. Such other relief as the court deems just and proper.

Respectfully submitted,

JOHN ASHCROFT  
Attorney General

EDWARD F. DOWNEY  
Assistant Attorney General  
Missouri Bar No. 28866

P. O. Box 899  
Jefferson City, Missouri 65102  
(314) 751-3321

Interim Status Regulations

40 CFR Part 265

Subparts

A - General

B - General Facility Standards

C - Preparedness and Prevention

D - Contingency Plan and Emergency Procedures

E - Manifest System, Recordkeeping, and Reporting

F - Groundwater Monitoring

G - Closure and Post-Closure

K - Surface Impoundments

**Environmental  
Protection Agency**

**Hazardous Waste Management System**

**Standards for Owners and Operators of  
Hazardous Waste Treatment, Storage,  
and Disposal Facilities**

BEFORE THE  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF MISSOURI

In the MATTER OF

Advanced Circuitry Division )  
Litton Industries Incorporated )  
Springfield, Missouri )  
)  
)  
)

No. 82-001

ORDER TO CEASE AND CORRECT

IMMINENT HAZARD

I. Under the authority of Section 260.420 of the Revised Statutes of Missouri 1980, the Advanced Circuitry Division, Litton Industries Incorporated, its officers, agents, employees and assigns are hereby ordered to cease the hazard created by the condition of their industrial process wastewater lagoon generally and hereinafter referred to as the "A pond", and immediately correct the imminent hazard present in an environmentally safe manner approved by the Department of Natural Resources.

The imminent hazard is created by:

- a. The presence of toxic and hazardous materials in the aforementioned "A pond";
- b. The unstable condition of the "A pond" berm;
- c. The land surface at risk of contact with the escape of the large volume of liquid and sludges contained in the "A pond" is Karst topography, as evidenced by the presence of sinkholes and a recently occurring sinkhole immediately adjacent to the "A pond" berm, and;
- d. The sinkholes cause a direct connection between the land surface aforementioned and the groundwater system of the area which includes caverns and caves, springs and private drinking water supplies.

Be it known that for the reasons of the aforementioned conditions, the Department of Natural Resources declares that the Advanced Circuitry Division, Litton Industries, Inc. has created an imminent hazard which may cause serious

environmental harm and hereby orders such hazard to cease immediately.

Ordered this 18th day of March 1982

*Fred A. Lafser*

Fred A. Lafser, Director  
Missouri Department of Natural Resources

Copy of the foregoing served by Certified Mail to:

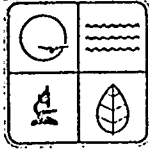
Ron Enos, President  
Advanced Circuitry Division  
Litton Industries Incorporated  
P. O. Box 2847, 4811 W. Kearney  
Springfield, Missouri 65808

on this 18th day of March 1982

cc: Missouri Attorney General's Office  
Attention: Ed Downey  
Broadway Building  
Jefferson City, Missouri 65101

Mr. John Nixon  
Springfield Regional Office  
1155 East Cherokee Street  
Springfield, Missouri

✓ Waste Management Program  
Missouri Department of Natural Resources  
P. O. Box 176  
Jefferson City, Missouri 65102



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
P.O. Box 1368 2010 Missouri Blvd. Jefferson City, Missouri 65102 (314) 751-3241

March 19, 1982

CERTIFIED MAIL P26 0335885

Mr. Ron Enos, President  
Advanced Circuitry Division  
Litton Industries, Inc.  
P. O. Box 2847  
4811 West Kerarney  
Springfield, Missouri 65803

Dear Mr. Enos:

The Department of Natural Resources is issuing an emergency directive to Advanced Circuitry Division of Litton Industries, hereinafter referred to as "Litton ACD", to dispose of wastewater in an environmentally safe manner from industrial process wastewater lagoon generally and hereinafter referred to as "Pond A". This emergency directive is in conjunction with the "Order to Cease and Correct Imminent Hazard" issued under the authority of Section 260.420, RSMo., 1980. This directive, in accordance with 10 CSR 25-7.011(2)(F), will authorize Litton ACD to take the following actions:

- (1) Litton ACD shall discharge as much wastewater as possible and acceptable to the Springfield city sewer until Pond A is lowered at least three (3) feet.
- (2) As an alternate to paragraph (1) and as may be necessary to achieve desired lagoon level reductions, wastewater from Pond A shall be applied by spray irrigation on ACD property (30 acres more or less available for spray irrigation) at a rate of approximately 1/4 inch per day until Pond A level is lowered at least three (3) feet.
- (3) Wastewater shall not be applied directly to any known sinkholes on the property.
- (4) A final decision on the adequacy of lowering the level of the pond three feet will be made by the Department after that action is completed. The Department may request that additional wastewater be removed from Pond A if it is seen that three feet is not adequate to stabilize the lagoon.
- (5) Litton ACD shall hire its own geotechnical engineer experienced with dam design to evaluate the stability of the lagoon berms and the surrounding topography. Confirmation that this has been accomplished shall be provided to DNR by March 22, 1982.
- (6) Litton ACD shall report to DNR Springfield Regional Office on a daily basis advising DNR of their progress. A log of all actions taken by Litton regarding this project shall be maintained and provided DNR on a weekly basis. The Department can be reached in the event of an emergency at (314) 634-2436 (24 hour number).

Christopher S. Bond Governor  
Fred A. Lafser Director

Division of Environmental Quality  
Robert J. Schreiber Jr., P.E. Director

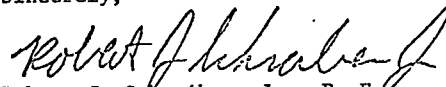
Exhibit 3

Mr. Ron Enos  
March 19, 1982  
Page 2

- (7) Litton shall not take any action not expressly specified in this directive unless prior approval is given by DNR.

This emergency directive will expire on April 4, 1982, unless the Department Director finds it necessary to terminate it sooner in order to protect human health and the environment. This directive does not preclude Litton ACD from complying with other state or federal laws and regulations.

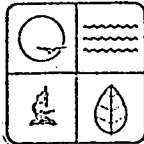
Sincerely,



Robert J. Schreiber, Jr., P. E.  
Director  
Division of Environmental Quality

RJS/vlw

cc: Ed Downey, Attorney General's Office  
U. S. EPA Region VII  
Water Pollution Control Program  
Springfield Regional Office  
Waste Management Program  
Laboratory Services Program



March 26, 1982

CERTIFIED MAIL P26 0335887

RECEIVED

MAR 29 1982

Mr. Ron Enos, President  
Advanced Circuitry Division, Litton Industries Inc.  
P. O. Box 2847, 4811 West Kearney  
Springfield, Missouri 65803

SOLID WASTE  
MANAGEMENT PROGRAM

Dear Mr. Enos:

The Department of Natural Resources is hereby issuing an emergency directive to Advanced Circuitry Division of Litton Industries, hereinafter referred to as Litton ACD, in accordance with 10 CSR 25-7.011 (2) (F).

This order is effective immediately and replaces the emergency directive dated March 19, 1982.

The Department of Natural Resources is hereby advising Litton ACD that a catastrophic sinkhole collapse could occur in the bottom of Pond A at any time. If this occurs, the total contents of Pond A, including wastewater and hazardous sludge, would be discharged directly to the groundwater. To minimize the chances of this hazard occurring, Litton ACD is hereby authorized and directed to take the following actions:

- 1) Litton ACD shall discharge as much wastewater as possible and acceptable to the Springfield city sewer until all liquid portions are removed from Pond A.
- 2) As an alternate to the Paragraph (1), and as may be necessary to empty the lagoon, wastewater from Pond A shall be applied by spray irrigation on Litton ACD property (30 acres more or less available for spray irrigation) at a rate of approximately one-third inch per day.
- 3) Wastewater shall not be applied directly to any known sinkholes on the property.
- 4) Removal of the liquid portion of the lagoon reduces the danger of a catastrophic collapse of Pond A. However, hazardous sludge and contaminated soil will remain in the lagoon bottom posing a threat to groundwater if a sinkhole should develop in the lagoon bottom. For that reason, Litton ACD is hereby ordered to submit to the Waste Management Program, for approval, a revised closure plan specifically addressing removal of the sludge and contaminated soil. This plan shall include a revised timetable and shall be submitted by April 15, 1982.
- 5) Litton ACD shall report to DNR Springfield Regional Office on a daily basis advising DNR of their progress. A log of all actions taken by Litton regarding this project shall be maintained and provided DNR on a weekly basis.

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
P.O. Box 1368 2010 Missouri Blvd. Jefferson City, Missouri 65102 (314) 751-3241

Christopher S. Bond Governor  
Fred A. Lafser Director

Division of Environmental Quality  
Robert J. Schreiber Jr., P.E. Director

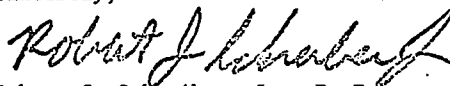
Exhibit 4

Ron Enos  
March 26, 1982  
Page 2

- 6) Litton shall not take any action not expressly specified in this directive unless prior approval is given by DNR. The Department can be reached in the event of an emergency at (314)634-2436 (24 hour number).

This emergency directive will expire on April 30, 1982 unless the Department of Natural Resources finds it necessary to terminate it sooner in order to protect human health or the environment. This directive does not preclude Litton ACD from complying with other state or federal laws and regulations.

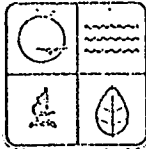
Sincerely,



Robert J. Schreiber, Jr., P. E.  
Director  
Division of Environmental Quality

RJS/vlw  
cc: Ed Downey, Attorney General's Office  
U. S. Environmental Protection Agency, Region VII  
Water Pollution Control Program  
Springfield Regional Office  
✓ Waste Management Program  
Laboratory Services Program





July 31, 1981

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
P.O. Box 1368 1915 Southridge Drive Jefferson City, Missouri 65102 (314) 751-3241

Mr. William Guyette, President  
Advanced Circuitry Division  
Litton Industries Incorporated  
P.O. Box 2847  
4811 W. Kearney  
Springfield, MO 65803

Dear Mr. Guyette:

Enclosed is a copy of the inspection report conducted by the Missouri Department of Natural Resources on June 16, 1981. This letter will detail what is required of your company along with the deadline date for each requirement.

1. Due to the contamination found in your monitoring wells and other ground and surface water samples near your facility (see enclosed report from the MoDNR Laboratory Services Program), the Missouri DNR, under the authority given it in Section 260.380.1(9) RSMo, request all previous analysis of your monitoring wells, sanitary lagoon, and percolation lagoon (lagoon A). Litton Industries, Inc. must also develop a monitoring plan to determine, to the satisfaction of the Department, that there is no longer any hazardous waste constituents in any waste stream which enters the lagoons, and then the ground water. This monitoring plan should include the necessary waste streams, the clarifier, the sanitary lagoon, and the percolation lagoon. As part of the plan include a sketch of the portion of the plant which includes these three processes and any incoming waste streams, sampling locations and methods to obtain representative samples, sample handling procedures (type of containers, preservative, if any, storage conditions, etc.), sampling frequency or time table, analysis parameters for each sample and the registered laboratory performing the analysis, and all previous analysis as requested above. This plan with all it's parts is to be submitted to the regional office and this office by September 1, 1981.
2. Achieve the required two foot freeboard in the percolation lagoon (A lagoon), and the treatment tank by September 18, 1981. Inform this office and the regional office by September 1, 1981, of the steps you plan to take to achieve the two foot free board.

Christopher S. Bond Governor  
Fred A. Lufser Director

Division of Environmental Quality  
Robert J. Schreiber Jr., P.E. Director

Exhibit 5

Mr. Guyette  
Page 2  
July 31, 1981

3. Install warning signs and develop adequate security measures to prevent the unknowing entry of persons or livestock into the percolation lagoon area (Unsatisfactory Features #3) by September 1, 1981. Inform this office and the Regional Office of the improved security at the percolation lagoon by September 1, 1981.
4. Immediately mark and label all containers of hazardous waste as described in Numbers 4 and 5 of the "Unsatisfactory Features".
5. "Unsatisfactory Features" Number 2 should be completed by September 1, 1981.
6. "Unsatisfactory Feature" Number 6 should be completed by October 9, 1981. The present closure plan lacked detail of the steps needed for, A) removal of the sludge and B) equipment decontamination. There must also be included with the closure plan a documentation to indicate your firm's financial assurance/mechanisms for the facilities surface impoundments closure. Please review the enclosed Subparts G and H of 40 CFR Part 265 from the January 12, 1981, Federal Register. Submit a copy of the revised closure plan and documentation of financial assurance to this office and the Regional Office by October 9, 1981.

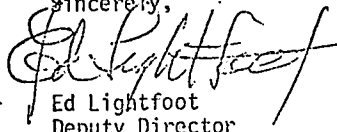
Below is a summary of the compliance schedule which must be met by your company.

Immediately	-Mark and label all containers according to DOT
September 1, 1981	-Submit monitoring plan -Submit proposed steps to achieve a two foot freeboard -Improved security at percolation lagoon -Notification to MDNR of improved security -Contingency plan to appropriate authorities
September 18, 1981	-Two foot freeboard in percolation lagoon and treatment tank
October 9, 1981	-Closure plan revised and submitted to MDNR -Assurance of financial requirements

Mr. Guyette  
Page 3  
July 31, 1981

If there are any questions concerning the requirements of this letter, please don't hesitate to contact either Art Groner or Paul Meiburger of this office, or Burt McCullough of the Springfield Regional Office.

Sincerely,



Ed Lightfoot  
Deputy Director  
Air and Land Branch

EL:PM/db

Enclosure

cc: David Doyle, EPA Enforcement  
MODNR Water Pollution Control Program  
Springfield Regional Office

## HAZARDOUS WASTE COMPLIANCE INSPECTION REPORT

Litton Systems, Inc.  
Advanced Circuitry Division  
4811 West Kearney  
Springfield, Missouri 65807  
(417) 862-0751  
MDNR #01317  
EPA I.D. #MOD007152903

On June 16, 1981 Burt McCullough, Art Groner, and Lyle Crocker of the Missouri Department of Natural Resources conducted a hazardous waste compliance inspection at Litton Systems, Inc. at Springfield in Greene County, Missouri.

Litton manufactures printed circuit boards. The manufacture of these boards consists of a copper plating process. Litton generates about 374,044 kg/year of hazardous waste as follows: chrome sulfuric acid (3,474 kg/year), waste oils (5,144 kg/year), electroplating wastewater treatment sludge (365,426 kg/year). Sludges are shipped to Bob's Home Service, waste oils are shipped by Radium Petroleum Company, and acids are shipped to National Industrial Environmental Services.

### UNSATISFACTORY FEATURES:

- 1). Insufficient freeboard at hazardous waste percolation lagoon. (40 CFR 265.222)
- 2). Copies of contingency plan not circulated to appropriate state and local agencies. (40 CFR 265.53)
- 3). Inadequate security at waste handling facilities. (40 CFR 265.14)
- 4). Inadequate labeling of hazardous waste. (40 CFR 262.31)
- 5). Inadequate marking of hazardous waste. (40 CFR 262.32)
- 6). Inadequate closure plan. (40 CFR Part 265 Subparts G and H)
- 7). Inadequate freeboard at waste treatment tank. (40 CFR 265.192)

### COMMENTS:

The percolation lagoon had 4½ inches of freeboard on the date of inspection. This lagoon contains about 8 million gallons of electroplating wastewater. This lagoon is adjacent to a sinkhole. Overflow of the lagoon or failure of the dikes would result in drainage to that sinkhole. About one foot of freeboard was observed on a waste treatment tank. This tank is used to mix a flocculant with the wastewater prior to disposal in the percolation lagoon.

Although security guards are posted at the plant at all times, the fence surrounding the plant is inadequate to restrict entry. No sign with the legend "Danger - Unauthorized Personnel Keep Out" was posted at the gate.

Hazardous Waste Inspection Report  
Litton Systems, Inc.  
Page 2

Drums of hazardous waste at the shipping dock were not marked in accordance with D.O.T. regulations, or labeled in accordance with D.O.T. regulations. These drums also did not have the date of accumulation marked on the drum. Some of these drums, containing spent acids, were missing bungs. No type of containment was provided in the event of spillage from these drums.


The contingency plan developed pursuant to 40 CFR 265.51 adequately meets the requirements set up in the regulations. Copies of this plan, however, are not circulated to the agencies specified in the regulations.

Throughout the plant, there was a considerable amount of spillage on the floor, etc. Floor drains go to the percolation pond. Because of the diversity of materials used within the plant, it is impossible to know what types of materials are going into the percolation lagoon and ultimately ending up in the groundwater.

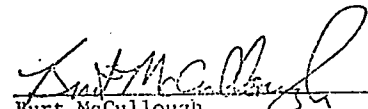
RECOMMENDATIONS:

- 1). Get 2 feet of freeboard on the percolation lagoon.
- 2). Get 2 feet of freeboard on the waste treatment tank.
- 3). Label and mark all containers of hazardous waste in accordance with D.O.T. regulations.
- 4). Post warning signs at access points to the plant.
- 5). Circulate the contingency plan to applicable agencies.
- 6). Improve closure plan to incorporate deficiencies.
- 7). Develop better housekeeping practices.

APPROVED:

  
John R. Nixon, P.E.  
Administrator

SUBMITTED:

  
Burt McCullough  
Environmental Specialist II

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL QUALITY  
LABORATORY SERVICES PROGRAM

Report of Investigation  
Litton Advanced Circuitry Division  
May 20, 1981

RECEIVED  
JUN 30 1981

SOLID WASTE  
MANAGEMENT PROGRAM

INTRODUCTION

At the request of the Water Pollution Control Program, an investigation was conducted of the Litton Advanced Circuitry Division in Springfield, Missouri, and various sites in the vicinity during the period from 1000 to 1800, May 20, 1981. The purpose of the investigation was to determine the source of volatile organics found in earlier analyses, and the effect on local ground water. Sampling was performed by David Paulsen and Larry Alderson of the Laboratory Services Program, DEQ. Personnel involved in the inspection included Jim Dow, Production Engineer with Litton, Bob Carson and Karen Chandler, with the City of Springfield, and Burt McCullough and John Nixon of the Springfield Regional Office.

METHODS

Grab samples were collected by filling appropriate containers while maintaining a zero head space to prevent the loss of volatile organics.

At the request of Litton representatives, two (2) extra sets of samples were collected for comparative analyses. Samples were collected at each of the following locations:

Sample  
Number

- 81-6227 - Fulbright Springs - included as a control.
- 81-6228 - Unnamed spring located on Stephens property feeding Clear Creek (this site was substituted for the upper end of Clear Creek at Clear Creek Park off Rt. AB - permission to enter the property was denied).
- 81-6229 - Ritter Spring #1 West
- 81-6230 - Ritter Spring #2 East
- 81-6231 - Fantastic Caverns - cave spring
- 81-6232 - Fantastic Caverns - potable water supply
- 81-6233 - Little Sac River - at Fantastic Caverns
- 81-6234 - Litton Sanitary Lagoon

Page Two  
Litton Advanced Circuitry Division  
May 20, 1981  
June 23, 1981

#### METHODS (CON'T)

##### Sample Number

- 81-6235 - Litton "C" Lagoon
- 81-6236 - Litton "A" Lagoon
- 81-6237 - Litton Monitoring Well - West
- 81-6238 - Litton Monitoring Well - East

Procedures used in the analyses were performed in accordance with those outlined in EPA Method Number 624. This method uses a purge and trap device in conjunction with a Gas Chromatograph/Mass Spectrometer.

#### OBSERVATIONS

Starting with Fulbright Springs, to be used mainly as a background sample, the investigation moved to Clear Creek Park off Route AB. The owner of the park insisted that no samples were to be collected on his property, so a small nameless spring on the Stephens property neighboring the park was substituted.

The Ritter Springs #1 West and #2 East, were visited next. Ritter Spring #1 West was particularly noted as having a much higher flow and was more turbid than was observed on a prior visit of February 25, 1981.

With the help of Russell Campbell, employee of Fantastic Caverns, samples were collected from a cave stream, the potable water supply, and the Little Sac River, which bordered the Fantastic Caverns property.

Litton's Sanitary Lagoon was sampled from a canoe using a Kemmerer sampler at a depth of about two (2) feet. Litton's "C" Lagoon had been pumped dry, but contained a small amount of water due to recent rains. The "A" Lagoon, which was noted to be very full, about one (1) foot from the top of the dike, was also sampled from a canoe using the Kemmerer sampler at a depth of about three (3) to four (4) feet.

The monitoring wells West and East, located just North of the "A" Lagoon, were sampled by using a small hand operated diaphragm pump supplied by Litton.

#### RESULTS

The results for the samples collected are attached to this report as Appendix A.

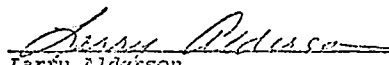
Page Three  
Litton Advanced Circuitry Division  
May 20, 1981  
June 23, 1981

DISCUSSION

The two (2) monitoring wells were not bailed prior to sampling, therefore, some of the compounds found in those samples may have been due to leaching of the PVC casing from which the wells were constructed.

Chlorination of the potable water supply at Fantastic Caverns may also have contributed to the type of compounds found in that sample.

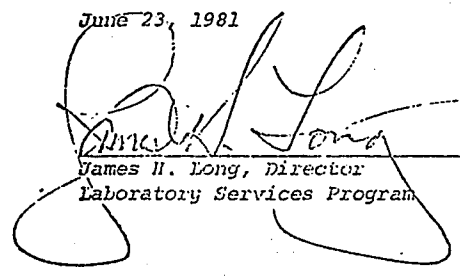
Submitted by

  
Larry Alderson  
Environmental Specialist II

Date

June 23, 1981

Approved by

  
James H. Long, Director  
Laboratory Services Program

cc: Richard Rankin, Director of Staff, Water Pollution Control Program  
Art Groner, Environmental Specialist IV, Solid Waste Management Program  
Burt McCullough, Environmental Specialist II, Springfield Regional Office  
Robert Schreiber, Director, Division of Environmental Quality

/ds



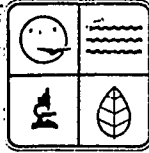
RESULTS

	Fulbright Springs	Stephens Spring	Ritter Spring 1-West	Ritter Spring 2-East	Fantastic Caverns Cave	Fantastic Caverns Potable	Little Sac River	Litton Sanitary Lagoon	Litton C Lagoon	Litton A Lagoon	Litton Monitoring Well West	Litton Monitoring Well East
COMPOUND NAME	81-6827	81-6228	81-6229	81-6230	81-6231	81-6232	81-6233	81-6234	81-6235	81-6236	81-6237	81-6238
Trichloroethylene (ug/l)	*	*	*	200	7.0	4.9	20.8	233	*	*	106	30
1,2 Dichloropropane (ug/l)	*	*	*	11.4	*	*	*	*	4.1	4.3	119	105
1,1,1-Trichloroethane (ug/l)	*	*	*	12.6	*	*	3.7	*	*	3.2	67.9	47.2
Trans-1,2-Dichloroethylene (ug/l)	*	*	*	27.8	*	*	*	27.5	*	*	260	256
Chloroform (ug/l)	*	*	*	*	*	*	*	*	*	4.2	*	*
Bromodichloromethane (ug/l)	*	*	*	*	*	4.4	*	*	*	*	*	*
Dibromochloromethane (ug/l)	*	*	*	*	*	7.1	*	*	*	*	*	*
Vinyl Chloride	*	*	*	*	*	*	*	*	*	*	59.4	58.3
1,1-Dichloroethylene (ug/l)	*	*	*	*	*	*	*	*	*	*	14.3	12.5
1,1-Dichloroethane (ug/l)	*	*	*	*	*	*	*	*	*	*	112	132

Additional peaks found in some samples were identified using the NBS Library. A gross estimate of concentration was made.

dibromomethane (ug/l)	*	*	*	*	*	*	*	*	*	*	*	*
1-butene (ug/l)	*	*	*	*	*	*	*	*	*	15	*	*
thiobismethane (ug/l)	*	*	*	*	*	*	*	*	*	45	*	*
2-propanone (ug/l)	*	*	*	*	*	*	*	*	*	75	*	*
carbon disulfide (ug/l)	*	*	*	*	*	*	*	*	*	35	*	*
tetrahydrofuran (ug/l)	*	*	*	*	*	*	*	*	*	16	*	*
1-butanol (ug/l)	*	*	*	*	*	*	*	*	*	300	*	*

\*The compound was not found or it was less than 3.0 ug/l.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
P.O. Box 1368 1915 Southridge Drive Jefferson City, Missouri 65102 (314) 751-3241

September 10, 1981

Mr. James K. Dow, P. E.  
Facilities Manager  
Advanced Circuitry Division  
Litton Industries Incorporated  
P. O. Box 2847  
4811 West Kearney  
Springfield, MO 65803

RE: Response to Your Letter of  
August 24, 1981

Dear Mr. Dow:

All of your actions in response to my letter of July 31, 1981, have met the approval of the Solid Waste Management Program except the following:

1. The proposed monitoring plan should also include sampling and analysis of the east and west monitoring wells. These wells should be pumped, and then allowed to recharge before the samples are obtained. The frequency of sampling and analysis for the monitoring wells and those points noted in your proposed plan should be monthly until February 1, 1982, at which point the Missouri Department of Natural Resources will receive the findings to determine if quarterly monitoring would be adequate till closure.
2. The freeboard on the percolation lagoon must be twenty four (24) inches. We will allow an extension of the original compliance schedule to a final date of October 30, 1981, for the necessary two feet of freeboard on the percolation lagoon.
3. Concerning the financial requirements for closure, personnel from the Solid Waste Management Program were in contact with Mr. Ott Elt of Marshall McClennen Insurance Company in Los Angeles, California, about the financial assurance mechanism for closure. There is a Federal Register which should be published in the very near future which will contain various options for assuring proper financial requirements for closure (40 CFR, Part 265, Subpart H). Litton Industries must meet one of these options by October 13, 1981.

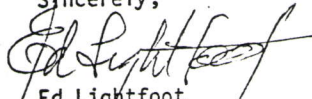
Christopher S. Bond Governor  
Fred A. Lafser Director

Division of Environmental Quality  
Robert J. Schreiber Jr., P.E. Director  
Exhibit 6

Mr. James K. Dow, P.E.  
Page Two  
September 10, 1981

If there are any questions concerning this letter don't hesitate to contact Art Groner of the Solid Waste Management Program or Burt McCullough of the Springfield Regional Office.

Sincerely,



Ed Lightfoot  
Deputy Director  
Air & Land Branch

EL/PM/bki

cc: Water Pollution Control Program  
Solid Waste Management Program  
Springfield Regional Office  
Gerald Lucey

**"ENFORCEMENT CONFIDENTIAL"**

Determined Not Confidential

7/25/83